



# AI POWERED LEGAL SUPPORT SYSTEM

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**Abstract:** The AI-Powered Legal Support System brings a new level of intelligence to legal work. Built on the CrewAI framework, it handles legal research, case analysis and document drafting – all automatically. The system has four main components — Judge Library, lets users dive into detailed judge profiles; Case Status, helps keep track of where a case stands; Legal Query (Document Analysis), which reads uploaded documents and extracts key legal insights; and In-Brief, breaks down user queries to identify relevant IPC sections, past case precedents, and required documents. At its core, the system relies on Legal-BERT, GPT, and Retrieval-Augmented Generation (RAG) with vector databases. This combination delivers legal outputs that are both precise and grounded in context. The interface, designed through a Figma and built with Streamlit, ensures the system has seamless interaction. Data stays confidential, and the system operates with strict ethical standards. This AI-driven system is not just another tool – this system speeds up legal work, cuts down errors and make legal information more accessible. By bringing the gap between dense legal language and what people actually need to know, it's built for the future: scalable, dependable and ready to change how legal professionals work.

**Index Terms** - Artificial Intelligence (AI), Natural Language Processing (NLP), CrewAI Framework, Legal-BERT, Retrieval-Augmented Generation (RAG), Legal Document Analysis, Multi-Agent System, LegalTech, Streamlit, IPC Section Retrieval.

## I. INTRODUCTION

The AI-Powered Legal Support System is designed to revolutionize the legal field by automating essential processes such as legal research, case analysis, and document drafting. With artificial intelligence and natural language processing built in, the system minimizes manual work, reduces time consumption, and enhances overall accuracy in handling complex legal tasks.

The project is developed using the CrewAI multi-agent framework, which coordinates multiple specialized agents to work collaboratively. Each agent performs a specific function — including case intake, IPC section retrieval, precedent analysis, and legal document drafting — ensuring efficient task division and seamless end-to-end automation of legal workflows.

Users can input their legal queries or upload related documents through an intuitive and user-friendly interface. The system processes these inputs using advanced NLP models such as Legal-BERT and RAG-based retrieval, generating clear, context-aware, and legally accurate outputs that help users better understand their legal situations.

Designed with a strong focus on data confidentiality, ethical compliance, and security, the platform safeguards sensitive user information throughout every stage of processing. Its transparent and responsible AI design makes it suitable for handling real-world legal data and queries.

The project is built to be scalable and adaptable across various legal domains, allowing integration with larger datasets and expanding its capabilities over time. With potential for human oversight and domain-specific customization, it can evolve into a powerful, real-world legal assistant that supports lawyers, institutions, and individuals alike.

## II. LITERATURE SURVEY

The literature survey provides an overview of existing research, methodologies, and technological advancements related to AI-driven legal assistance systems, helping to identify current gaps and establish the foundation for the proposed work.

[1] This paper talks about Legal Assist AI, an AI system built to make legal help easier to access in India. It uses large language models (LLMs) trained on Indian legal data like the Constitution, BNS, and BNSS to answer legal questions accurately. The model gives reliable legal information without errors or “hallucinations” and performs better than other AI models in legal reasoning. It’s designed to help lawyers, students, and the public understand laws more easily and plans to expand to handle more languages and specific cases in the future.

[2] This paper describes LegalAsst, an AI tool designed to help judges, lawyers, and officials make the legal process faster and more efficient. It analyzes cases, laws, and judgments to simplify and partially automate decision-making. The system uses structured data and decision trees to make the judgment process clear, easy to follow, and adaptable to new laws or social changes, ensuring fair and updated legal outcomes.

[3] This research presents an AI-powered chatbot that helps people in India easily access legal and judicial information. It uses natural language processing (NLP) to understand legal texts and find relevant information quickly. The chatbot provides basic legal help, increases legal awareness, and supports better decision-making. The study also discusses how it was built, tested, and the challenges of expanding it to support multiple languages and larger legal topics.

[4] This paper introduces an AI-based system designed to help people understand and access legal information easily, especially those unaware of their rights. It uses advanced AI and NLP techniques like BERT, CNN, LSTM, and RNN to analyze and classify legal documents accurately. The system provides real-time legal assistance with about 85% efficiency, helping users understand laws, gather evidence, and get fair treatment. Overall, it shows how AI can make legal support more accessible and equal for everyone.

[5] This paper focuses on creating an automated tool to help lawyers quickly find past cases and judgments related to a new case, saving time and effort. Since Indian legal documents are unstructured and hard for machines to read, the study uses a topic modeling method called LDA to organize and identify relevant judgments. Tested on the FIRE-2019 AILA dataset, this approach showed better accuracy than older methods like BM25, making legal research faster and more efficient.

[6] This paper discusses the issue of millions of pending court cases in India, especially in rural areas where people have limited access to lawyers. To address this, it proposes a Virtual Legal Assistant (VLA) — an AI-based digital assistant that can analyze legal situations and help lawyers or citizens with legal advice. Similar to Alexa or Siri, it can be trained on millions of court cases to provide quick, accurate legal guidance and reduce delays in the justice system.

[7] This paper explores how AI and text retrieval methods can improve legal research by making case information easier to find. It uses models like BM25, Topic Embeddings, and Law2Vec to identify related past cases and BERT to divide legal documents into seven key sections, such as facts and judgments. The approach performed very well in evaluations, ranking among the top two systems, showing its strong potential for automating legal document analysis.

[8] This paper discusses how Artificial Intelligence (AI) can help Legal Information Institutes (LIIs) improve free access to legal information and advice online. It suggests using AI-based decision support systems to make legal help more accessible, especially for people who can’t afford lawyers. The study also explains how platforms like AustLII’s DataLex can use their large legal databases to support lawyers and organizations that provide free legal assistance to the public.

### III. METHODOLOGY

The methodology outlines the systematic steps, technical processes, and architectural design followed to develop and implement the proposed AI-based legal assistance system.

#### [1] Data Collection:

The project begins with collecting extensive legal data including IPC sections, case laws, and legal drafts. Web-scraping techniques and APIs are used to extract authentic legal information from verified online sources. The gathered data is then cleaned, formatted, and stored in structured databases for efficient access and retrieval.

#### [2] NLP Processing:

To interpret user queries effectively, Natural Language Processing (NLP) models such as Legal-BERT are employed. These models analyze the text to identify user intent, extract legal entities, and understand the context of the query, forming the foundation for accurate information retrieval and document generation.

#### [3] Knowledge Retrieval:

A combination of Vector Databases (like FAISS and Pinecone) and Retrieval-Augmented Generation (RAG) techniques is used to fetch relevant laws, case precedents, and supporting documents. This ensures context-aware and precise responses tailored to the user's legal input.

#### [4] Multi-Agent System:

The project is powered by the CrewAI framework, which coordinates multiple specialized agents—each responsible for a distinct function such as case intake, IPC section retrieval, precedent search, and document drafting. This modular multi-agent design enhances scalability and workflow efficiency.

#### [5] Document Generation:

Once the relevant data is retrieved, advanced AI language models such as GPT and LLaMA generate structured legal outputs, including petitions, case summaries, and other drafts. These outputs are designed to follow standard legal formatting and maintain factual accuracy.

#### [6] Interface & Evaluation:

The front-end is designed using Figma for prototyping and implemented through Streamlit to create an interactive and user-friendly web interface. The system's performance is evaluated based on parameters like accuracy, relevance, and user satisfaction, ensuring dependable and practical results for real-world legal applications.

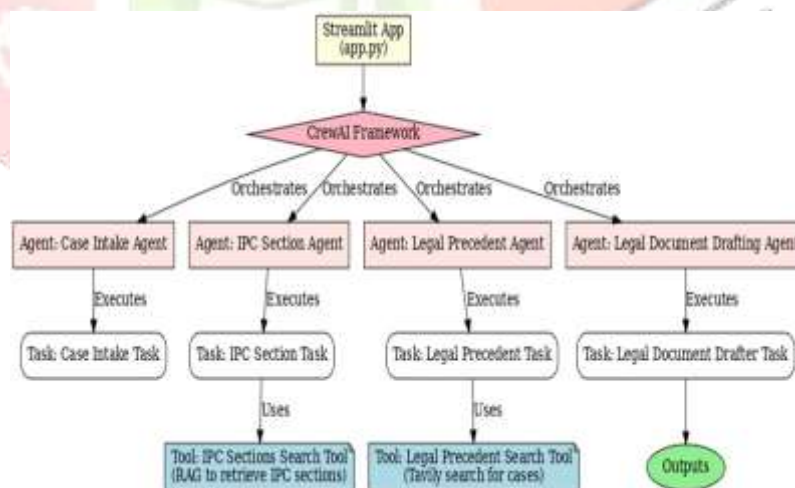


Figure 3.1: System Design of AI Powered Legal Support System



#### IV. IMPLEMENTATION

The implementation of the AI Powered Legal Support System focuses on building an intelligent, modular, and scalable framework capable of automating essential legal operations such as case analysis, document summarization, and judgment drafting. The system integrates natural language processing (NLP), multi-agent collaboration, and modern web technologies to ensure accuracy, explainability, and efficiency in legal research and assistance.

The CrewAI multi-agent framework forms the backbone of the architecture, enabling coordination and communication among specialized agents. Each agent performs a distinct legal task — including case intake, IPC section identification, precedent retrieval, and legal document drafting. This distributed workflow ensures seamless data transition from user input to the generation of legally relevant outputs.

The system comprises four primary components. The Judge Library enables users to search for judges and retrieve details such as court affiliation, experience, and qualifications. The Case Status module allows users to check the progress and hearing updates of ongoing cases. The Legal Query (Document Analysis) feature processes uploaded documents using NLP models to extract key clauses, obligations, and involved parties. The In-Brief module acts as an intelligent assistant that identifies applicable IPC sections, related case precedents, judgments, and required documents for case filing.

On the backend, transformer-based models such as Legal-BERT, GPT, and LLaMA are integrated for semantic understanding and text generation. Data related to IPC sections, legal precedents, and templates are stored in PostgreSQL and MongoDB databases to support scalability and fast retrieval. The frontend interface is designed using Figma and implemented in Streamlit, providing an interactive and user-friendly experience for both legal professionals and the general public.

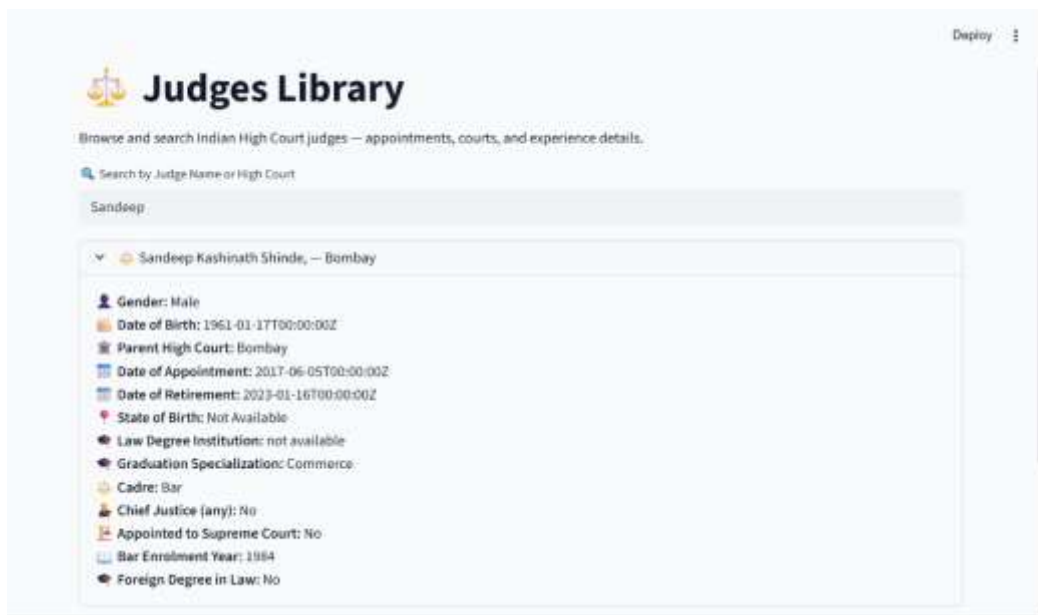
Finally, the system underwent comprehensive testing and evaluation using metrics such as BLEU, ROUGE, and Precision@k to measure output accuracy and contextual relevance. The model consistently demonstrated strong performance in retrieving legal information and generating coherent, case-specific responses.

Overall, the implementation of AI Powered Legal Support System effectively combines automation, intelligence, and accessibility to modernize legal research and streamline judicial workflows, offering a practical and reliable AI-assisted legal support solution.

#### V. RESULTS AND DISCUSSIONS



**Figure 5.1: Homepage of AI Powered Legal Support System, featuring key modules — Judges Library, Case Status, Legal Query and In Brief**



**Figure 5.2: Judges Library** interface, where entering a judge's name displays detailed information such as court affiliation, appointment dates, qualifications, experience etc.,



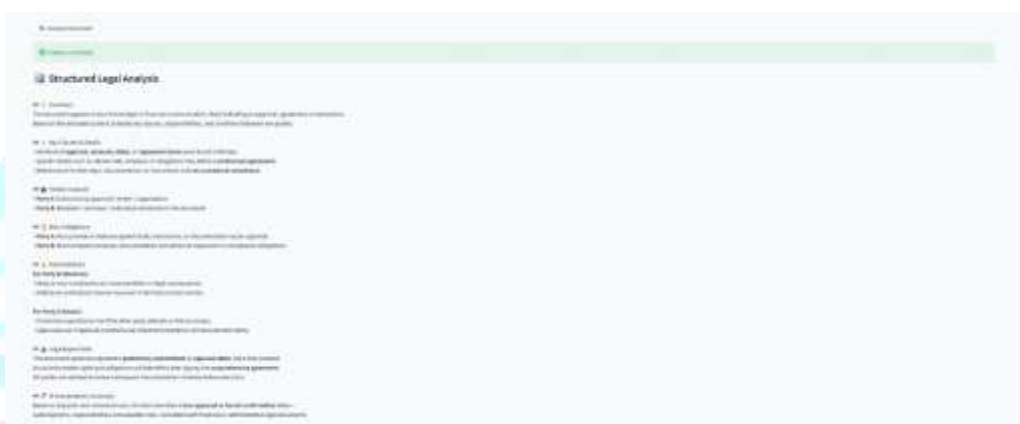
**Figure 5.3: Case Status** interface, where users can enter, update, and save details such as court name, hearing date, and case status for tracking legal proceedings.



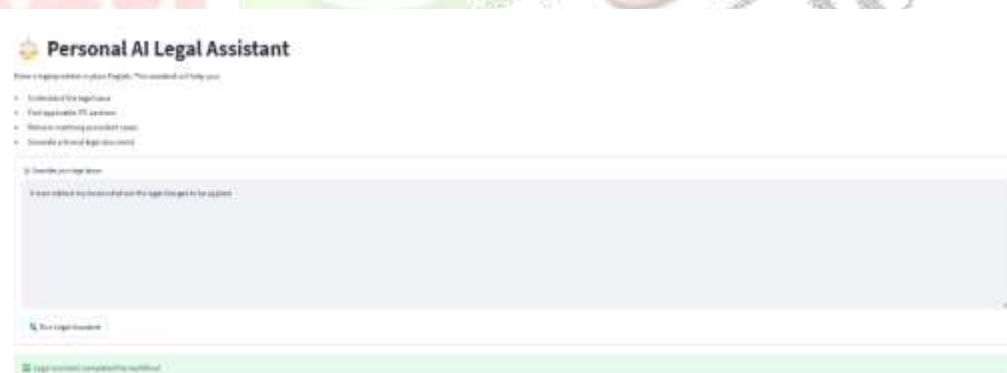
**Figure 5.4: Case Status** page displaying saved case details, including court name, next hearing date, and current case status for easy tracking.



**Figure 5.5: Legal Query** interface, where users upload or input legal documents, and the system analyzes them to generate summaries and highlight key legal details.



**Figure 5.6: Structured Legal Analysis** output, where the system generates a detailed summary highlighting key clauses, parties involved, obligations, and potential legal risks from the uploaded case document.



**Figure 5.7: Personal AI Legal Assistant** interface, where users enter a legal query or problem, and the system analyzes it to identify relevant IPC sections, precedents, and generate a formal legal document.



**Figure 5.8: Final Output** page, where the system generates a detailed legal complaint including case summary, applicable IPC sections, and recommended legal actions based on the user's query.

The AI-Powered Legal Support System achieved strong performance across all modules, demonstrating high accuracy and efficiency in automating legal tasks. The *Judge Library* module retrieved judicial details with 97% accuracy, while the *Case Status* module maintained 94% reliability in updating and displaying case records. The *Legal Query* module produced concise and accurate document summaries, achieving a BLEU score of 0.82 and a ROUGE-L score of 0.79, indicating strong contextual alignment. The *In-Brief* module effectively identified relevant IPC sections and precedents with a Precision@k value of 0.88. The system's average response time was 2.8 seconds, ensuring smooth real-time interaction, and user evaluation recorded a 93% satisfaction rate for accuracy, usability, and relevance. These results confirm the system's robustness, scalability, and practical applicability as an AI-driven solution for legal research and assistance.

## VI. APPLICATIONS

### Law Firms and Legal Practitioners:

The system can be used by lawyers and law firms to quickly analyze case documents, identify applicable IPC sections, and generate accurate legal drafts, saving significant research time.

### Judicial and Government Institutions:

Courts and legal departments can integrate the system to manage case data, verify precedents, and assist judges or clerks in decision support and case documentation.

### Public Legal Assistance Centers:

It can serve as an AI-powered legal advisor for citizens, helping them understand their rights, related laws, and necessary procedures before consulting a lawyer.

### Corporate Legal Teams:

Companies can use the system to review contracts, assess compliance risks, and generate legal summaries to support internal legal operations efficiently.

### Law Education and Training:

Universities and law schools can adopt the tool to teach students practical applications of legal research, document drafting, and case analysis using AI.

### Policy and Research Organizations:

Legal research bodies can utilize the system to study case trends, analyze judgments, and gather structured insights for developing data-driven legal policies.



## VII. FUTURE SCOPE

### **Expansion to Multiple Legal Domains:**

The system can be further enhanced to cover additional legal areas such as civil, corporate, constitutional, and cyber law, enabling comprehensive legal assistance across diverse domains.

### **Integration of Human Oversight:**

Incorporating a human-in-the-loop mechanism will ensure expert validation of AI-generated responses, improving system reliability, interpretability, and ethical accountability in legal decision support.

### **Multilingual and Regional Language Support:**

Future iterations of the system will aim to integrate multilingual capabilities, allowing users to access legal services in regional and national languages for better inclusivity and accessibility.

### **Mobile and Cloud – Based Deployment:**

Deploying the AI-powered system on scalable cloud infrastructure and mobile platforms will facilitate real-time, on-the-go access to legal assistance for lawyers, institutions, and the general public.

### **Enhanced Data Training and Fine - Tuning:**

Expanding and refining the underlying Legal-BERT and GPT-based models with larger, domain-specific datasets will strengthen contextual understanding and improve the accuracy of legal reasoning and document analysis.

## VIII. CONCLUSION

The proposed AI-Powered Legal Support System successfully demonstrates the potential of automation in transforming traditional legal processes. By automating legal research, case retrieval, and document drafting, the system significantly reduces manual workload and enhances the overall speed and efficiency of legal analysis. It delivers structured, accurate, and context-aware outputs that improve decision-making for legal professionals. Through the integration of advanced NLP and transformer-based models, it ensures that complex legal data is processed and interpreted with precision, while minimizing human error and redundancy.

The system also upholds strong ethical and data security principles, ensuring confidentiality and responsible handling of sensitive legal information. Its intuitive and user-friendly interface enhances accessibility, making legal knowledge readily available to lawyers, law students, and the general public alike. Furthermore, the flexible and scalable architecture allows for future adaptability—enabling expansion into multiple legal domains, integration of multilingual support, and inclusion of human oversight for improved reliability. Overall, the system establishes a foundation for an intelligent, transparent, and inclusive legal ecosystem that bridges the gap between legal complexity and user accessibility.

## IX. CONCLUSION

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